Chapter 1
Introduction

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1-1. PURPOSE

The central purpose of this Design Guide is to ensure good quality in planning, design and use of Army Music and Drama Centers (MDC). The Guide attempts to describe the relationship between the physical characteristics and functional qualities of performance facilities. It establishes flexible criteria along with information and recommendations on which to base design decisions and evaluations.

Thoughtful use of the Guide will help develop designs responsive to new and changing needs by improving early design decisions. It will aid in the evaluation of designs in conjunction with the Army regulations and DOD criteria referenced herein, and provide general guidance in planning facilities for inclusion in military construction programs. Finally, using service personnel will find this Guide helpful in developing improvements and in better utilizing existing facilities.

1-2. SCOPE AND APPLICATION

Guidance, criteria, and procedures explained in this publication are applicable to all new Music and Drama Center (MDC) construction projects and to the evaluation of Army Performing Arts facilities in general. Morale Support Activities personnel contemplating improvements to existing occupied or found space will also find this document necessary.

Permanent Music and Drama Center projects will in most cases be designed as non-repetitive facilities. Illustrative examples provided are based on realistic but hypothetical facility programs; they are not definitive prototypes. Each installation's program and context will necessarily reflect local conditions. The Design Guide is not intended to furnish all the information needed for successful preparation of project designs, but it will provide the procedural framework and basic criteria.

1-3. EMPHASIS

Design guidance stresses the unique characteristics of performance facilities over the general construction criteria developed in other technical manuals and reference material. Technical and functional quality is essential to a design at the outset, while attractiveness, economy and low maintenance are of long-range importance to operating a successful program. Technical and functional characteristics are rigorously defined by either procedural or prescriptive specification. A procedural description states required attributes and the means of ensuring their attainment. A prescriptive specification states vital dimensions, properties and materials in a way that completely defines acceptable products and assemblies. General and secondary criteria can often be best stated as performance requirements without rigidly specifying how they are to be achieved. Planning personnel will find these distinctions useful in organizing criteria statements.

The influence of pre-design deliberations will be improved by taking an inclusive approach to initial planning, followed by careful paring-down to balance desires with available resources. This process at once identifies larger goals and defines most important immediate needs without precluding future growth.

1-4. FORMAT

This Guide is structured to assist the reader through successive steps of MDC planning and design processes. Its format is designed to allow the participants in the overall design process to find and utilize the information applicable to their roles. However, a general reading is advised to gain understanding of the whole process.

A. CHAPTER CONTENT

Each of five chapters assembles information of like nature and application.

Chapter 1: Introduction
This chapter presents overall purposes and organization of this material, and explains how to use the Guide.

Chapter 2: Program and Planning
This chapter discusses the goals of the Army Performing Arts Program, procedures for determining activity programs for individual MDC's, project initiation, site selection and planning, and building planning. These are pre-design elements of the Project Development Process.

Chapter 3: Design
Presented in an integrated manner, this chapter relates the functional, architectural, dimensional and essential technical criteria to the significant concepts involved in defining and organizing performing arts spaces into a whole building. It stresses the translation of functional requirements and intended uses to the physical configuration of MDC facilities.

Chapter 3 is further divided corresponding to the major divisions of any MDC.

1. ***The Room:*** *The stage and audience seating*
2. ***Backstage:*** *Performer/production facilities*
3. ***Front End:*** *Lobby and audience facilities*

Chapter 4: Technical Packages
Special technical data and standards regarding theater lighting, sound, stage, mechanical and other equipment systems are presented. This chapter furnishes technical criteria and baseline recommended inventory for facilities of various sizes and uses.

Chapter 5: Illustrative Examples
This chapter presents examples of the application of programming, planning, and design guidelines developed in preceding chapters. Illustrations include existing operational facilities of a scope comparable to those anticipated.

B. ORGANIZATION

A major purpose of the Design Guide is to impart an understanding of how various design factors interact. The contents are organized to illustrate the nature and order of major decisions and most importantly their physical consequences. After distinguishing basic components of facility design, elaboration of each proceeds from general to specific.

1-5. USE OF REFERENCE MATERIAL

Information contained in this Guide is intentionally unique to the design of performance facilities, and is meant to be used with existing related references. As project development takes place, emphasis will shift from one group of reference material to the next, even as involvement and responsibility shifts among participants. It will be essential to have on hand appropriate regulations and manuals at any given stage. Table 1-5.1 lists applicable reference material and indicates the usefulness of its content for specific tasks in the project development process.

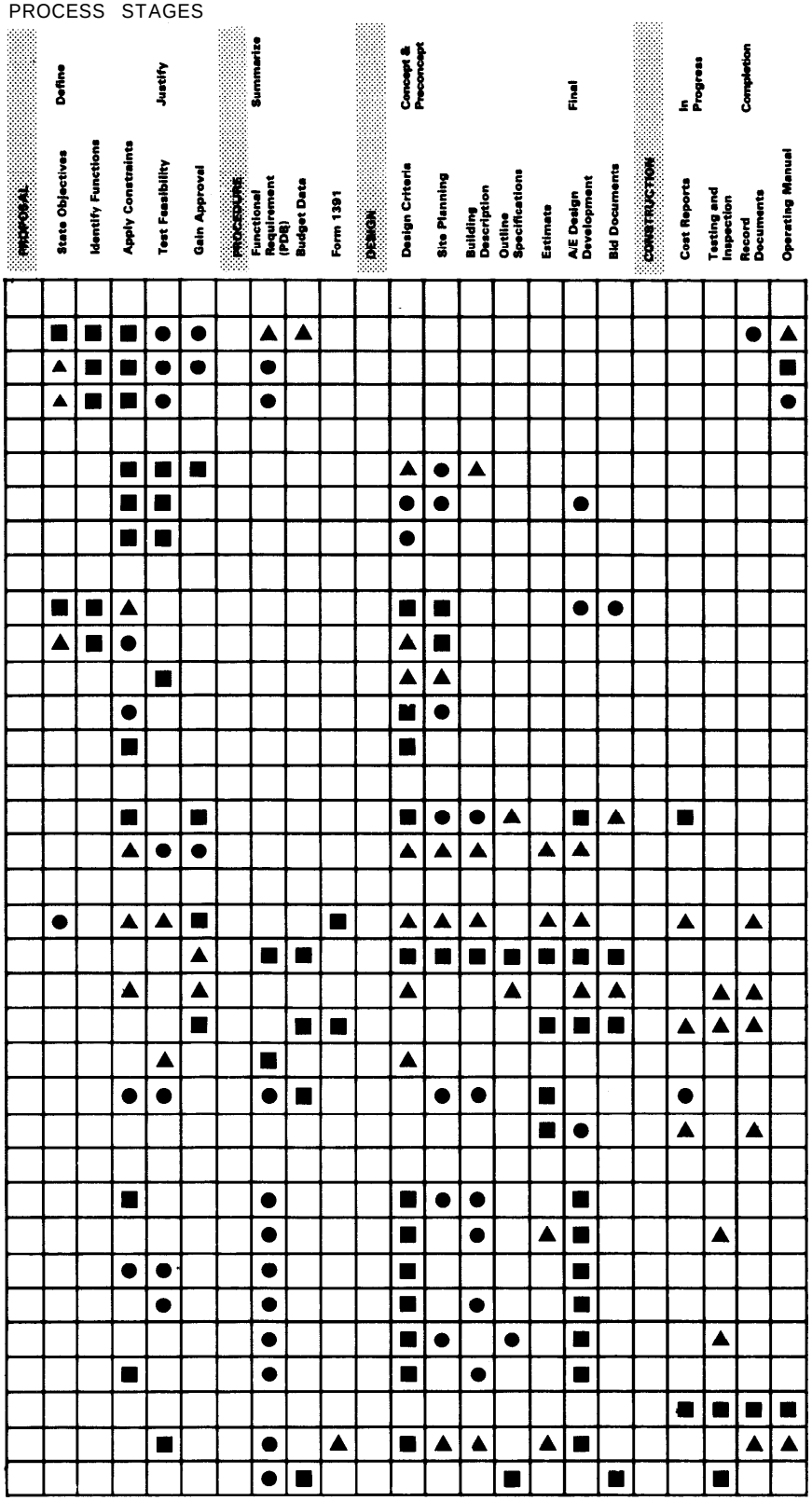
1-6. PROJECT DEVELOPMENT PROCEDURES

A clear understanding of the Military Construction, Army (MCA) Program is especially critical in the early planning stage, when the burden of effort rests with the using service. AR 415-15, MCA Program Development and AR 415-20, Project Development and Design Approval furnish detailed definition of required procedures, Chapter 2 of this Guide discusses step-by-step the process from recognition of the need for facility construction through preparation of a Project Development Brochure and data supporting DD Form 1391, which formally justifies project requirements. Several points about this sequential procedure deserve special emphasis.

A. DURATION

The time period required for development of final design documents is at least three years from installation level recognition of high priority status. One or two years will be added for bidding and construction.
The first year is devoted to developing sufficient data and rationale to justify the project's placement in the Short Range Construction Program. In the next six months, the project's functional requirements and budget data summary are codified and submitted for approval to begin design.

PROCESS STAGES



■ Primary References
● Useful References
▲ Supplemental Information

REFERENCES	
AR 28–1	Army Recreation Services
AR 28–8	Army Entertainment Program Operational Guide
AR 28–91	Army Musical and Theater Program
	MASTER PLANNING
AR 210–20	Master Planning for Permanent Army Installations
TM 5–803–1	Master Planning Principles and Procedures
AR 405–70	Utilization of Real Estate
	SITE CRITERIA
TM 5–803–3	Site Planning
TM 5–803–6	Site Planning of Community Centers
TM 5–822–1	Traffic Study Requirements
TM 5–822–3	Parking for Nonorganizational Vechicles
TM 5–822–2	Engineering & Design, Roads, Streets, Walks and Open Storage
	GENERAL CRITERIA
DOD 4270.1–M	Construction Criteria Manual
TM 5–800–1	Construction Criteria for Army Facilities
	PROCEDURES
AR 415–15	MCA Program Development
AR 415–20	Project Development and Design Approval
ER 1110–345–100	Design Policy for Military Construction
AR 415–35	Construction, Minor Construction
TM 5–800–3	Project Development Brochures Part I
AR 415–17	Empirical Cost Estimates for Military Construction
TM 5–800–2	Preparation of Cost Estimates
	TECHNICAL
EM 1110–1–103	Design for the Physically Handicapped
TM 5–809–1–11	Load Assumptions for Buildings
TM 5–810–1 /M 5–810–5	Mechanical Design - HVAC Plumbing
TM 5–811–1	Electrical Design - Power Supply
TM 5–811–2	Electrical Design - Interior System
TM 5–830–1–4	Planting Design
TM 5–812–1	Fire Prevention Manual
AR 415–10	General Provisions for Military Construction
ER 1110–345–700	Design Analysis
ER 1110–345–720M10	Specifications/Drawings

FIGURE 1-5.1 CORRELATED REFERENCES

This approval may take several more months. Actual design time will occupy as much as a year, after which the drawings are advertised and construction contract awarded. There may be further delays stemming from requirements for special equipment which must be ordered months in advance but installed integral with structure. In short, personnel initiating a project must be prepared to think ahead five years to projected needs when the building will be occupied.

It is likely initiating personnel will not be identical with using personnel. Moreover, the intervening process has built-in resistance to adjustment except as a result of significant changes in mission. It is therefore of utmost importance that early planning be well-informed, incisive, and carefully recorded for transmission through the process.

B. MANDATORY PROCEDURE

The MCA Process involves and coordinates among many levels of military organization. To be effective, its sequential procedure is mandatory and must be carefully observed. For example, failure to gain proper approvals for modification of the master plan (if required) will stop the process.

C. ATTENTION TO DETAIL

Firm, precise statement of requirements will not only expedite matters but ensure the quality of results. This is especially important with regard to technical and equipment elements, and for those elements for which standard criteria are inadequate or nonexistent.

D. COMPLETENESS

Nothing should be left to chance that can be specified. Military construction projects are expected to result in complete, fully functional facilities. It will be extremely difficult to add on elements neglected in the Project Development Brochure, especially as design progresses.

Figure 1-6.1 illustrates the MCA Process sequence in simplified form, from the viewpoint of principal participants. Using service personnel should request review opportunities for themselves and for their technical advisers at stages beyond concept design, if it will help them be thoroughly acquainted with the facility when it is completed.

1-7. KEY PARTICIPANTS

AR 415-10,15 and 20 define policies, procedures and responsibilities which govern the military construction program. AR 415-15 details the program development phase; AR 415-20 details the design phase; and AR 415-10 details the execution phase and the interrelationship among all three phases of the construction process. For a given Music and Drama Center project, the principal participants are broadly categorized as the using service and construction service. The using service is responsible for establishing facility requirements, while the construction service manages the design and execution phases.

The concept of team planning is inherent in the project development process. The participants in this process represent different viewpoints and disciplines. This Guide will help provide common language to improve translation of early planning goals to the completed facility.

A. USING SERVICE

At the installation level the using service representative is the installation commander, who will coordinate the efforts of MDC staff, facilities engineer, and any technical consultants retained during the pre-design phase. Using service responsibilities are as follows:

1. *Development of functional requirements in conjunction with criteria in this Guide.*
2. *Justification of functional requirements falling beyond the scope of criteria.*
3. *Preparation and submission of the Project Development Brochure required by AR 415-20.*
4. *Obtaining installation action to gain departmental site approval if the project is not sited according to HQDA approved master plan.*
5. *Preparation and submission of DD Form 1391 and supporting data in accordance with AR 415-15.*
6. *Approval of concept design to certify compliance with functional requirements.*

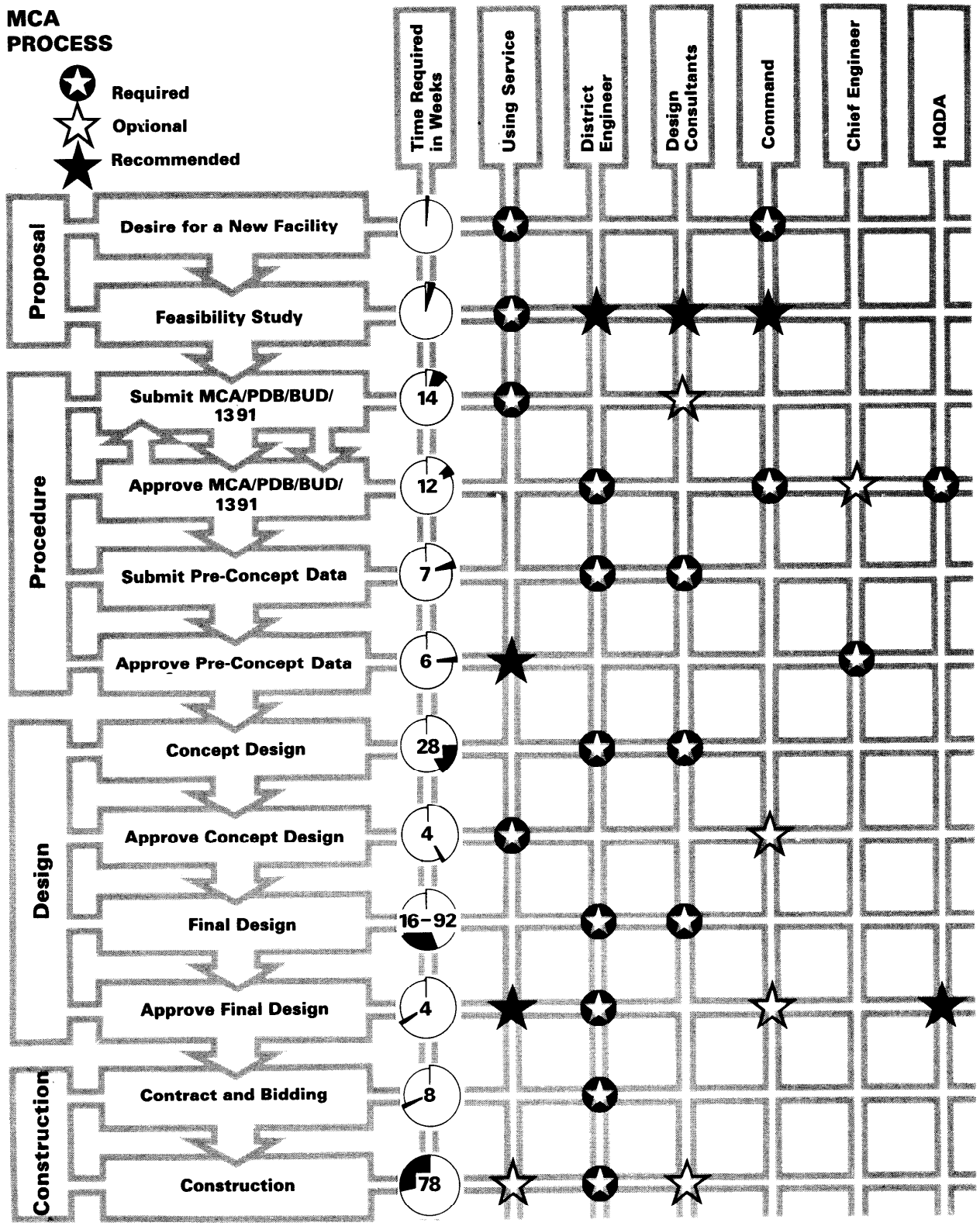


FIGURE 1.6-1 THE MCA PROCESS

B. CONSTRUCTION SERVICE

The Chief of Engineers will in most cases designate the district engineer responsible for construction service field office work. He will work closely with the using service and facilities engineer during the design phase. Design work will most often be accomplished by contract with a private architect-engineer firm, although minor construction and improvements may be effected by government forces. The district engineer will also assist the using service upon request during project development, and will manage construction activity. Construction service responsibilities are as follows:

1. *Ensure that the functional requirements of the using service are recognized and incorporated into the project design.*
2. *Ensure that the requirements of the using service fall within the criteria of this Guide and other DOD and DA standards.*
3. *Ensure that deviations from criteria requested by the using service are completely justified in project design analysis.*
4. *Ensure that the quality standards for overall design are emphasized as stated within this Guide.*
5. *Ensure that the assemblage of user information is coordinated upon completion of the project, and is furnished-together with the completion records required by AR 415-10, to the using service.*

C. DESIGN SERVICE

This term normally refers to the architect-engineer or other private design professional under contract to Corps of Engineers in the design phase. However, similar qualifications apply to technical consultants who may be retained by the construction service under separate contracts or by the A-E as subconsultants, and to technical advisers retained by the using service out of its own budget. The using service should not hesitate to use qualified consultants in the programming and development phase, since the information generated at that time is critical to facility quality. Such procurement shall be without prejudice to selection of the A-E, although in civilian practice they are often identical. If specialized technical consultants (acousticians, stage designers, theater lighting specialists) are involved early, it is desirable to continue periodic services for the duration of the project. Architects, engineers, and technical consultants should be selected on the basis of the following qualifications:

1. *Recognized experience in the design of music and drama facilities. This can be ascertained by requesting from prospective design firms written responses listing with brief descriptions, past and current projects in the performing arts to which they have contributed services. These responses should indicate the nature and extent of the designers' services and the client to whom they were rendered. It is customary to advertise for responses locally and through the offices of professional associations. However, it is also wise to solicit recommendations from using service personnel, national organizations and recognized experts in the design and operation of related facilities in order to address requests to the widest range of candidates.*
2. *A demonstrated imaginative approach to site and building design that integrates design quality, functional efficiency, and cost control.*
3. *Responsiveness to unique demands of individual use programs, project criteria and sites. Interviews with a limited number of selected candidates is the best means of evaluating how clearly a designer understands the particular set of requirements and constraints he will face, provided a summary statement is issued with the invitation to interview, with equal advance notice to all candidates.*
4. *Sensitive design capability extending from overall building design to detailed construction and interior design. Critical reviews published in regular columns of well-respected newspapers and professional journals, design awards and the acclaim of fellow-practitioners are good indicators. If the choice is still difficult, visits to current and completed projects are helpful, although selection teams should not expect to see the solution to* ***their*** *programs, nor expect the designer to replicate someone else's.*
5. *Efficient and well-managed project procedures and coordination with consultants. To some extent, investigation of past projects will help reveal organizational competence. Before final selection is made, candidates may be requested to submit a written proposal detailing procedures, consultants, anticipated work schedule and staff manpower to be made available.*